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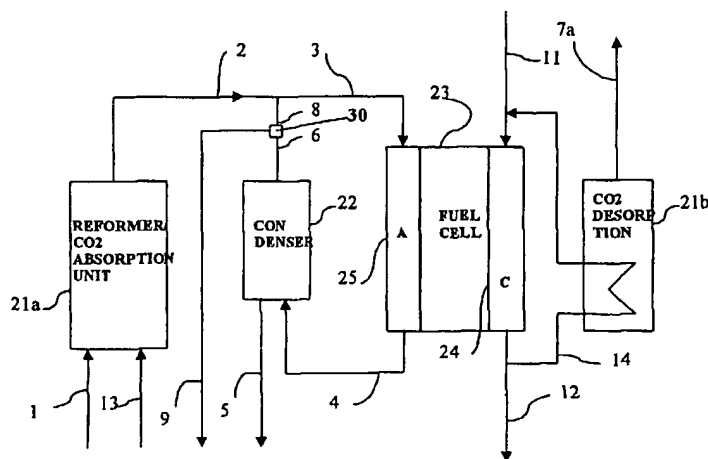
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(75) Inventors/Applicants (for US only): **VIK**, Arild
[NO/NO]; Slettenveien 76, N-5258 Blomsterdalen (NO).
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N-2315 Hamar (NO).
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(71) Applicant (for all designated States except US): **PRO-
TOTECH AS** [NO/NO]; Fantoftvegen 38, P.O. Box 6034,
Postterminalen, N-5892 Bergen (NO).
(71) Applicant (for MW only): **SAMUELS, Adrian, James**
[GB/GB]; c/o Frank B. Dehn & Co., 179 Queen Victoria
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(54) Title: **POWER GENERATION APPARATUS**



(57) Abstract: A power generation apparatus comprises a fuel cell and a reforming module, wherein the reforming module is adapted to reform hydrocarbon fuel into hydrogen and other components, and to separate said hydrogen from said other components. The apparatus is arranged so that said hydrogen is fed from the reforming module to the anode of the fuel cell. Carbon dioxide may be separated in the reforming module. Hydrogen may be recycled from the anode outflow back to the anode and/or tapped off. The apparatus may also contain a desorption module for releasing carbon dioxide. The absorption and release of carbon dioxide may be integrated and the carbon dioxide absorbent and/or desorbent may be recycled. Components of the apparatus may be thermally integrated. The apparatus may be used to generate electricity and produce hydrogen.



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